

ABSTRACT

A method for fabricating a probe for a scanning probe microscope, wherein the probe includes a mounting block, a cantilever and a tip, includes the steps of: forming a first mask to define a pattern for the tip and a second mask to define a pattern for the cantilever on an SOI wafer having a handle layer containing {100} single-crystalline silicon, an insulating layer and a device layer containing {111} single-crystalline silicon; etching the device layer by using the first and the second masks; forming a sidewall passivation layer on the device layer; etching the device layer by using the first mask to form the tip; etching the handle layer by using a third mask to define a pattern for the mounting block. By using the method, a probe made of {111} single-crystalline silicon can be fabricated with high yield.